

ABSTRACT

The invention relates to a method for altering a protein X such as to modify the characteristics thereof by a) obtaining the mutants X* of the sequence coding for protein X, by means of aleatory mutagenesis, b) transformation of cells with a phenotype [P-] with vectors comprising the mutated nucleic acids obtained in step (a) which code for proteins X*, where P-signifies that said cells are auxotrophic for substance P, P being the product of the action of X on the natural substrate thereof S, c) culturing said cells in a medium comprising a substrate S*, S* being an analogue of the natural substrate S of the protein X, d) selection of the cells [P-:: X*] which have survived step c) in which the proteins X* can biosynthesise the product P from the substrate S*. The invention further relates to mutated proteins X, nucleic acids, expression vectors, host cells comprising a vector, use of N-dideoxyribosyl transferases for the transfer of a dideoxyribose(ddR) from a dideoxyribonucleoside to another nucleoside, a method for production of compounds comprising a step using a mutated protein and a strain of E. coli.